Contents

Akiyama T: Circatidal swimming activity rhythm in a subtidal cumacean *Dimorphostylis asiatica* (Crustacea) 251
Aldegunde M → Soengas JL
Alderslade PN → Coll JC
Aliño PM → Coll JC
Alvarez MC → Amores A
Alvarez-Salgado XA → Villarino ML
Amores A, Bejar J, Alvarez MC: Replication, C and Ag-NOR chromosome-banding in two anguilliform fish species 845
Andrew NL → Schiel DR

Babcock RC → Coll JC
Baillieul M → Blust R
Baldwin BS: Selective particle ingestion by oyster larvae (*Crassostrea virginica*) feeding on natural seston and cultured algae 95
Bambang Y, Charmantier G, Thuet P, Trilles J-P: Effect of cadmium on survival and osmoregulation of various developmental stages of the shrimp *Penaeus japonicus* (Crustacea: Decapoda) 443
Barange M → Gibbons MJ
Barciela P → Soengas JL
Battle TE → Snell TW
Beaumont AR → Hoare K
Beiras R, Widdows J: Induction of metamorphosis in larvae of the oyster *Crassostrea gigas* using neuroactive compounds 327
Bejar J → Amores A
Bell KL, Smith VJ: Occurrence and distribution of antioxidant enzymes in the haemolymph of the shore crab *Carcinus maenas* 829
Beninger PG, Donval A, Le Pennec M: The osphradium in *Placopecten magellanicus* and *Pecten maximus* (Bivalvia, Pectinidae): histology, ultrastructure, and implications for spawning synchronisation 121
Beninger PG, St-Jean SD, Poussart Y: Labial palps of the blue mussel *Mytilus edulis* (Bivalvia: Mytilidae) 293
Benzie JAH, Williams ST: Gene flow among giant clam (*Tridacna gigas*) populations in Pacific does not parallel ocean circulation 781
Bick A → Bochert R
Blem CR → Fine ML
Blust R, Baillieul M, Decleir W: Effect of total cadmium and organic complexing on the uptake of cadmium by the brine shrimp, *Artemia franciscana* 65
Bochert R, Bick A: Reproduction and larval development of *Marenzelleria viridis* (Polychaeta: Spionidae) 763
Bourget E → Miron G
Bourget E → Pouliot F
Bowden BF → Coll JC
Bowen BW → Sears CJ
Boyd CM → Gradmann D
Breeman AM → Rooij JM van
Bricelj VM → Krause MK
Brown JA → Gotceitas V
Brown LD: Genetic evidence for hybridisation between *Haliotis rubra* and *H. laevigata* 89
Brownlee C → Pond DW
Bruggemann JH → Rooij JM van
Burton RS → Ganz HH

Carroll AR → Coll JC
Case JF → Moeller JF
Castro BG → Cortez T
Cembella AD → Turriff N
Chalker-Scott L: Survival and sex ratios of the intertidal copepod, *Tigriopus californicus*, following ultraviolet-B (290–320 nm) radiation exposure 799
Chapman RW → Sears CJ
Charmantier G → Bambang Y
Chong VC → Newell RIE
Chow S, Ushiama H: Global population structure of albacore (*Thunnus alalunga*) inferred by RFLP analysis of the mitochondrial ATPase gene 39
Clayton MN → Coll JC
Coll JC, Leone PA, Bowden BF, Carroll AR, König GM, Heaton A, Nys R de, Maida M, Aliño PM, Willis RH, Babcock RC, Florian Z, Clayton MN, Miller RL, Alderslade PN: Chemical aspects of mass spawning in corals. II. (–)-*Epi*-thunbergol, the sperm attractant in the eggs of the soft coral *Lobophytum crassum* (Cnidaria: Octocorallia) 137
Cortez T, Castro BG, Guerra A: Feeding dynamics of *Octopus mimus* (Mollusca: Cephalopoda) in northern Chile waters 497
Cortez T, Castro BG, Guerra A: Reproduction and condition of female *Octopus mimus* (Mollusca: Cephalopoda) 505
Crabtree RE → Donnelly J
Culik BM → Schmid D

Dai C-F → Fan T-Y
Dall W, Smith DM, Moore LE: Carotenoids in the tiger prawn *Penaeus esculentus* during ovarian maturation 435
Dauchez S, Legendre L, Fortier L: Assessment of simultaneous uptake of nitrogenous nutrients (^{15}N) and inorganic carbon (^{13}C) by natural phytoplankton populations 651
Davenport J: Upwelling-generated plankton strandlines: important predictable food sources for seabirds at Husvik, South Georgia 207
Davies PS → Harland AD
Decleir W → Blust R
Dick JTA → Elwood RW
Donnelly J, Torres JJ, Crabtree RE: Proximate composition and nucleic acid content of premetamorphic leptocephalus larvae of the congrid eel *Ariosoma balearicum* 851
Donval A → Beninger PG
Draisma SGA → Oppen MJH van
Dürbaum J: Discovery of postcopulatory mate guarding in Copepoda Harpacticoida (Crustacea) 81

Edmands S: Mating systems in the sea anemone genus *Epiactis* 723
Edwards A → Villarino ML
Elwood RW, Marks N, Dick JTA: Consequences of shell-species preferences for female reproductive success in the hermit crab *Pagurus bernhardus* 431

Fan T-Y, Dai C-F: Reproductive ecology of the scleractinian coral *Echinopora lamellosa* in northern and southern Taiwan 565
Fenton GE → Stewart BD
Fey CL → Haney JC
Figueiras FG → Villarino ML
Fine ML, McKnight Jr JW, Blem CR: Effect of size and sex on buoyancy in the oyster toadfish 401
Florian Z → Coll JC
Forster S, Graf G: Impact of irrigation on oxygen flux into the sediment: intermittent pumping by *Callianassa subterranea* and "piston-pumping" by *Lanice conchilega* 335
Fortier L → Dauchez S
Foster MS → Schiel DR
Fraser S → Gotceitas V
Fréchette M → Pouliot F
Fujita T, Kitagawa D, Okuyama Y, Ishito Y, Inada T, Jin Y: Diets of the demersal fishes on the shelf off Iwate, northern Japan 219

Galloway SB → Sears CJ
Ganz HH, Burton RS: Genetic differentiation and reproductive incompatibility among Baja California populations of the copepod *Tigriopus californicus* 821
García Reina G → Jiménez del Rio M
Gibbons MJ, Barange M, Hutchings L: Zoogeography and diversity of euphausiids around southern Africa 257
Giray C → King GM
Gleason D, Wellington GM: Variation in UVB sensitivity of planula larvae of the coral *Agaricia agaricites* along a depth gradient 693
Gómez I, Wiencke C, Weykam G: Seasonal photosynthetic characteristics of *Ascoseira mirabilis* (Ascoseirales, Phaeophyceae) from King George Island, Antarctica 167
Gotceitas V, Fraser S, Brown JA: Habitat use by juvenile Atlantic cod (*Gadus morhua*) in the presence of an actively foraging and non-foraging predator 421
Gradmann D, Boyd CM: Membrane voltage of marine phytoplankton, measured in the diatom *Coscinodiscus radiatus* 645

Graeve M → Hagen W
Graf G → Forster S
Grémillet DJH → Schmid D
Gržetić Z → Viličić D
Guerra A → Cortez T

Haddon M, Willis TJ: Morphometric and meristic comparison of orange roughy (*Hoplostethus atlanticus*: Trachichthyidae) from the Puysegur Bank and Lord Howe Rise, New Zealand, and its implications for stock structure 19
Hagen W, Kattner G, Graeve M: On the lipid biochemistry of polar copepods: compositional differences in the Antarctic calanoids *Euchaeta antarctica* and *Euchirella rostromagna* 451
Hagerman L, Vismann B: Anaerobic metabolism in the shrimp *Crangon crangon* exposed to hypoxia, anoxia and hydrogen sulfide 235
Halupa PJ, Howes BL: Effects of tidally mediated litter moisture content on decomposition of *Spartina alterniflora* and *S. Patens* 379
Hanelt D → Uhrmacher S
Haney JC, Haury LR, Mullineaux LS, Fey CL: Sea-bird aggregation at a deep North Pacific seamount 1
Hansen JLS, Timm U, Kiørboe T: Adaptive significance of phytoplankton stickiness with emphasis on the diatom *Skeletonema costatum* 667
Harland AD, Davies PS: Symbiont photosynthesis increases both respiration and photosynthesis in the symbiotic sea anemone *Anemonia viridis* 715
Harris RP → Pond DW
Haury LR → Haney JC
Hayward PJ → Peck LS
Heaton A → Coll JC
Helbling EW → Villafañe VE
Hellberg ME: Stepping-stone gene flow in the solitary coral *Balanophyllia elegans*: equilibrium and nonequilibrium at different spatial scales 573
Hoare K, Beaumont AR: Effects on an *Odh* null allele and a GPI low-activity allozyme on shell length in laboratory-reared *Mytilus edulis* 775
Hoegh-Guldberg O → Takabayashi M
Holm-Hansen O → Villafañe VE
Hopkins-Murphy SR → Sears CJ
Howes BL → Halupa PJ
Hutchings L → Gibbons MJ

Ikeda T: Distribution, growth and life cycle of the mesopelagic amphipod *Primno abyssalis* (Hyperiidea: Phrosinidae) in the southern Japan sea 789
Inada T → Fujita T
Ishito Y → Fujita T
Iwasaki K: Comparison of mussel bed community between two intertidal mytilids *Septifier virgatus* and *Hormomya mutabilis* 109

Jasprica N → Viličić D
Jensen P: Life history of the nematode *Theristus anoxybioticus* from sublittoral muddy sediment at methane seepages in the northern Kattegat, Denmark 131
Jiménez del Rio M, Ramazanov Z, García Reina G: Effect of nitrogen supply on photosynthesis and carbonic anhydrase activity in the green seaweed *Ulva rigida* (Chlorophyta) 687
Jin Y → Fujita T
Johansson S → Viitasalo M
Johnson MA, Le Pennec M: Association between the mollusc bivalve *Loripes lucinalis* and a *Chlamydia*-like organism, with comments on its pathogenic impact, life cycle and possible mode of transmission 523
Jones KJ → Villarino ML

Kamatani A → Oku O
Kattner G → Hagen W
Kelly LN → Snell TW
Kelly MS, McKenzie JD: Survey of the occurrence and morphology of subcuticular bacteria in shelf echinoderms from the north-east Atlantic Ocean 741
Kiørboe T → Hansen JLS
King GM, Giray C, Kornfield I: Biogeographical, biochemical and genetic differentiation among North American saccoglossids (Hemichordata; Enteropneusta; Harrimaniidae) 369
Kitagawa D → Fujita T
Kittaka J → Nishida S
König GM → Coll JC
Kornfield I → King GM
Koski M → Viitasalo M
Krause MK, Bricelj VM: *Gpi* genotypic effect on quantitative traits in the northern bay scallop, *Argopecten irradians irradians* 511
Krča S → Kurelec B
Kuma K → Suzuki Y
Kurelec B, Lucić D, Pivčević B, Krča S: Induction and reversion of multixenobiotic resistance in the marine snail *Monodonta turbinata* 305

Le Pennec M → Beninger PG
Le Pennec M → Johnson MA
Leder N → Viličić D
Legendre L → Dauchez S
Lehtonen KK: Geographical variability in the bioenergetic characteristics of *Monoporeia/Pontoporeia* spp. populations from the northern Baltic Sea, and their potential contribution to benthic nitrogen mineralization 555
Leone PA → Coll JC
Lucić D → Kurelec B

Machias A, Tsimenides N: Biological factors affecting the swimbladder volume of sardine (*Sardina pilchardus*) 859
Maida M → Coll JC
Marcus NH: Seasonal study of planktonic copepods and their benthic resting eggs in northern California coastal waters 459
Marks N → Elwood RW
Marshall N → Newell RIE
Massuti E → Reñones O
Matsunaga K → Suzuki Y
Matsuzawa Y → Sato K
McAuley PJ, Smith VJ: Effect of diel photoperiod on nitrogen metabolism of cultured and symbiotic zooxanthellae 145
McKenzie JD → Kelly MS
McKnight Jr JW → Fine ML
Miller RL → Coll JC
Minamikawa S → Sato K
Miron G, Pelletier P, Bourget E: Optimizing the design of giant scallop (*Placopecten magellanicus*) spat collectors: flume experiments 285
Mladenov PV → Stewart BG
Moeller JF, Case JF: Temporal adaptations in visual systems of deep-sea crustaceans 47
Moore LE → Dall W
Moore PG → Taylor AC
Morales-Nin B → Reñones O
Mullineaux LS → Haney JC

Naito Y → Sato K
Nakao S → Noda T
Napier IR: Growth and collapse of a spring phytoplankton bloom in the Firth of Clyde, Scotland 189
Newell RIE, Marshall N, Sasekumar A, Chong VC: Relative importance of benthic microalgae, phytoplankton, and mangroves as sources of nutrition for penaeid prawns and other coastal invertebrates from Malaysia 595
Nishida S, Takahashi Y, Kittaka J: Structural changes in the hepatopancreas of the rock lobster, *Jasus edwardsii* (Crustacea: Palinuridae) during development from the puerulus to post-puerulus 837
Noda T, Nakao S: Spatio-temporal population dynamics of the sand snail *Umbonium costatum*: importance of ontogenetic migration and annual recruitment variability 815
Nultsch W → Uhrmacher S
Nys R de → Coll JC

Oku O, Kamatani A: Resting spore formation and phosphorus composition of the marine diatom *Chaetoceros pseudocurvisetus* under various nutrient conditions 393
Okuyama Y → Fujita T
Olsen JL → Oppen MJH van
Oppen MJH van, Draisma SGA, Olsen JL, Stam WT: Multiple trans-Arctic passages in the red alga *Phycodrys rubens*: evidence from nuclear rDNA ITS sequences 179

Peck LS, Hayward PJ, Spencer-Jones ME: A pelagic bryozoan from Antarctica 757
Pelletier P → Miron G
Pellikka K → Viitasalo M
Pivčević B → Kurelec B
Pond DW, Harris RP, Brownlee C: A microinjection technique using a pH-sensitive dye to determine the gut pH of *Calanus helgolandicus* 75

Pouliot F, Bourget E, Fréchette M: Optimizing the design of giant scallop (*Placopecten magellanicus*) spat collectors: field experiments 277
Poussart Y → Beninger PG

Ramazanov Z → Jiménez del Rio M
Reñones O, Massuti E, Morales-Nin B: Life history of the red mullet *Mullus surmuletus* from the bottom-trawl fishery off the Island of Majorca (north-west Mediterranean) 411
Richard J → Villarino ML
Rico-Martinez R → Snell TW
Roff JC → Webber MK
Rooij JM van, Bruggemann JH, Videler JJ, Breeman AM: Ontogenetic, social, spatial and seasonal variations in condition of the reef herbivore *Sparisoma viride* 269
Ruckelshaus MH: Estimates of outcrossing rates and of inbreeding depression in a population of the marine angiosperm *Zostera marina* 583
Runge JA → Turriff N
Russell G: Pyrolysis mass spectrometry: a fresh approach to old problems in brown algal systematics? 153

Sakamoto W → Sato K
Sasekumar A → Newell RIE
Sato K, Sakamoto W, Matsuzawa Y, Tanaka H, Minamikawa S, Naito Y: Body temperature independence of solar radiation in free-ranging loggerhead turtles, *Caretta caretta*, during internesting periods 197
Schmid D, Grémillet DJH, Culik BM: Energetics of underwater swimming in the great cormorant (*Phalacrocorax carbo sinensis*) 875
Schiel DR, Andrew NL, Foster MS: The structure of subtidal algal and invertebrate assemblages at the Chatham Islands, New Zealand 355
Sears CJ, Bowen BW, Chapman RW, Galloway SB, Hopkins-Murphy SR, Woodley CM: Demographic composition of the feeding population of juvenile loggerhead sea turtles (*Caretta caretta*) off Charleston, South Carolina: evidence from mitochondrial DNA markers 869
Shimada S → Taniguchi A
Short SA → Stewart BD
Smith DC → Stewart BD
Smith DM → Dall W
Smith VJ → Bell KL
Smith VJ → McAuley PJ
Snell TW, Rico-Martinez R, Kelly LN, Battle TE: Identification of a sex pheromone from a rotifer 347
Soengas JL, Barciela P, Aldegunde M: Variations in carbohydrate metabolism during gonad maturation in female turbot (*Scophthalmus maximus*) 11
Spencer-Jones ME → Peck LS
St-Jean SD → Beninger PG
Stam WT → Oppen MJH van
Stewart BD, Fenton GE, Smith DC, Short SA: Validation of otolith-increment age estimates for a deepwater fish species, the warty oreo *Allocyttus verrucosus*, by radiometric analysis 29
Stewart BG, Mladenov PV: Reproductive periodicity in the euryalinid snake star *Astrobrachion constrictum* in a New Zealand fiord 543
Suzuki T → Taniguchi A
Suzuki Y, Kuma K, Matsunaga K: Bioavailable iron species in seawater measured by macroalga (*Laminaria japonica*) uptake 173

Takabayashi M, Hoegh-Guldberg O: Ecological and physiological differences between two colour morphs of the coral *Pocillopora damicornis* 705
Takahashi Y → Nishida S
Tanaka H → Sato K
Taniguchi A, Suzuki T, Shimada S: Growth characteristics of Parmales (Chrysophyceae) observed in bag cultures 631
Taylor AC, Moore PG: The burrows and physiological adaptations to a burrowing lifestyle of *Natatolana borealis* (Isopoda: Cirolanidae) 805
Taylor R, Williams DC: β-glucanase activity in the seastar *Pisaster ochraceus* 735
Thuet P → Bambang Y
Timm U → Hansen JLS
Torres JJ → Donnelly J
Trilles J-P → Bambang Y
Tsimenides N → Machias A
Turriff N, Runge JA, Cembella AD: Toxin accumulation and feeding behaviour of the planktonic copepod *Calanus finmarchicus* exposed to the red-tide dinoflagellate *Alexandrium excavatum* 55

Uchida M: Enzyme activities of marine bacteria involved in *Laminaria*-thallus decomposition and the resulting sugar release 639
Uhrmacher S, Hanelt D, Nultsch W: Zeaxanthin content and the degree of photoinhibition are linearly correlated in the brown alga *Dictyota dichotoma* 159
Ushiama H → Chow S

Videler JJ → Rooij JM van
Viitasalo M, Koski M, Pellikka K, Johansson S: Seasonal and long-term variations in the body size of planktonic copepods in the northern Baltic Sea 241
Viličić D, Leder N, Gržetić Z, Jasprica N: Microphytoplankton in the Strait of Otranto (eastern Mediterranean) 619
Villafañe VE, Helbling EW, Holm-Hansen O: Spatial and temporal variability of phytoplankton biomass and taxonomic composition around Elephant Island, Antarctica, during the summers of 1990–1993 677
Villarino ML, Figueiras FG, Jones KJ, Alvarez-Salgado XA, Richard J, Edwards A: Evidence of in situ diel vertical migration of a red-tide microplankton species in Ría de Vigo (NW Spain) 607
Vismann B → Hagerman L

Webber MK, Roff JC: Annual biomass and production of the oceanic copepod community off Discovery Bay, Jamaica 481
Webber MK, Roff JC: Annual structure of the copepod community and its associated pelagic environment off Discovery Bay, Jamaica 467
Wellington GM → Gleason D
Weykam G → Gómez I
Widdows J → Beiras R
Wiencke C → Gómez I
Williams DC → Taylor R
Williams ST → Benzie JAH
Willis RH → Coll JC
Willis TJ → Haddon M
Woodley CM → Sears CJ
Wulff JL: Sponge-feeding by the Caribbean starfish *Oreaster reticulatus* 313

Zajac RN: Sublethal predation on *Polydora cornuta* (Polychaeta: Spionidae): patterns of tissue loss in a field population, predator functional response and potential demographic impacts 531